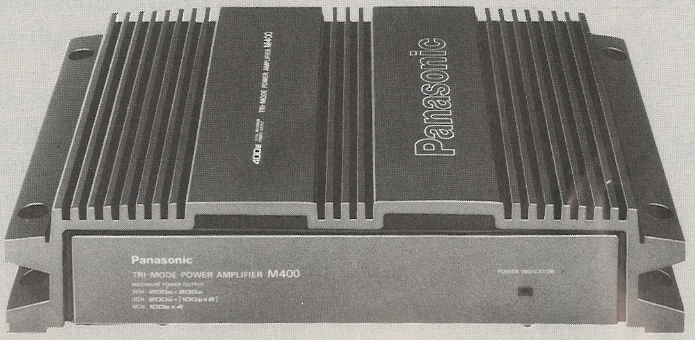
ORDER NO. APD8805883

Service Manual

AUTO PRODUCTS

CX-M400EN

STEREO POWER AMPLIFIER


Panasonic
Panasonic
TRI-MODE POWER AMPLIFIER M400
MAXIMUM POWER OUTPUT
2CH 200W+200W
3CH 200W+[100W×2]
4CH 100W×4
POWER INDICATOR

SPECIFICATIONS*

Power Supply:	DC 12V (11~16V) Test Voltage 14.4V, Negative Ground
Current Consumption:	40A (at 60W + 60W output)
Speaker Impedance:	4Ω~8Ω
Power Output:	2 x 120W (1,000 Hz, 1% at 4Ω) 4 x 60W (1,000 Hz, 1% at 4Ω)
Maximum Power Output:	2 x 200W (at 4Ω) 4 x 100W (at 4Ω)
Total Harmonic Distortion	
at 40W Output:	0.03% (20 Hz~20,000 Hz)
at 40W Output:	0.005% (1,000 Hz)
Signal to Noise Ratio:	100 dB (IHF. A)
Frequency Response:	5 Hz~100,000 Hz
Damping Factor:	60 (at 4Ω)
Input Sensitivity:	300mV
Input Impedance:	More than 10 kΩ
Dimensions:**	340(W) x 4-70(D) x 250(H) mm
Weight:**	5.2kg

* Specifications and the design are subject to possible modification without notice due to improvements.
** Dimensions and Weight shown are approxi-mate.

Panasonic

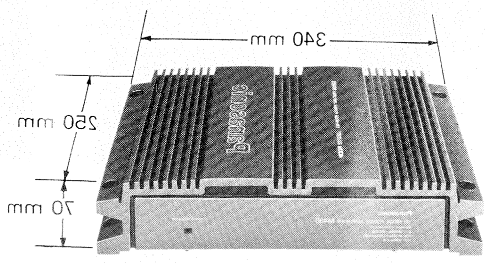
Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

14

CONTENTS

DIMENSIONS 1
FUSE REPLACEMENT 1
FEATURES 1
SYSTEM DIAGRAMS 1
OPERATION 2
BEFORE INSTALLING AND
WIRING CONNECTION 2
INSTALLATION 3
WIRING DISCRIPTION 3, 4
DISASSEMBLY INSTRUCTIONS 5
ALIGNMENT INSTRUCTIONS 6
IC BLOCK DIAGRAMS 7
SCHEMATIC DIAGRAM 8
WIRING DIAGRAM 9
EXPLODED VIEW 10
REPLACEMENT PARTS LIST .... 11~18

DIMENSIONS


340 mm
250 mm
70 mm

FUSE REPLACEMENT

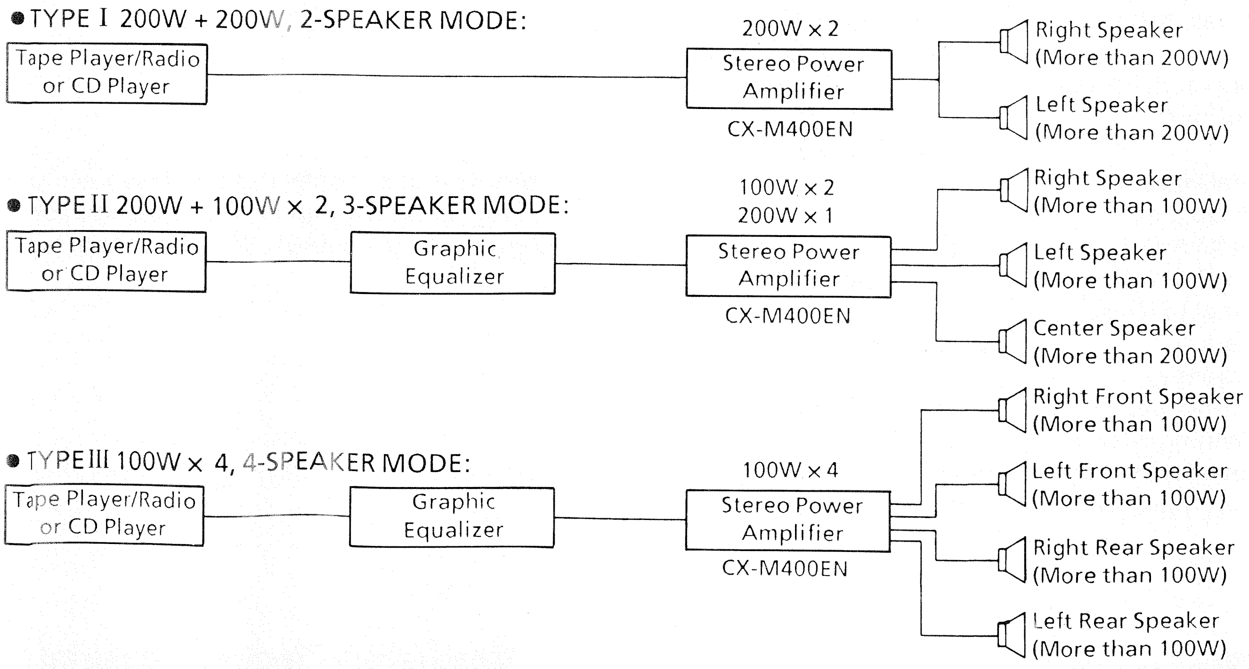
Be sure to use a fuse of specified rating (25A, 3A) when replacing a blown fuse. Fuses rated at higher capacity, use of any substitute, or connection without a fuse may result in a fire hazard or damaged to the unit. If the replacement fuse fails, contact your nearest authorized Panasonic Service Center.

FEATURES

- A DC-DC converter type power supply is built in.
- A high-through-rate IC is mounted after the preamplifier.
- The high-power design ensures enjoyment of sound in a high dynamic range.
- An aluminum radiator is employed.
- The power supply is automatically turned on and off by remote control from or tuner.
- A floating input system is employed.
- Can be connected to other sets having DIN or RCA terminals.
- The volume balance of tuner, deck, speaker, etc, can be controlled using the gain control knob.

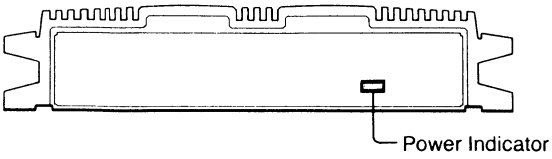
SYSTEM DIAGRAMS

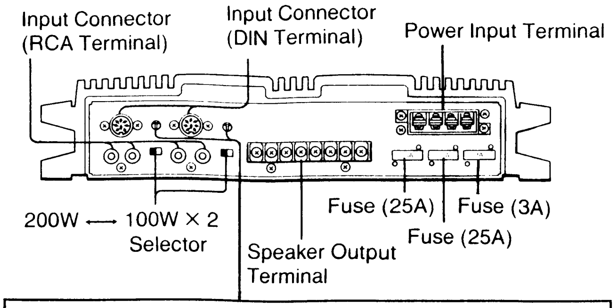
Various types of speakers are available from your dealer. Select the speakers that suit your preference.


●TYPE I 200W + 200W, 2-SPEAKER MODE:
Tape Player/Radio or CD Player
200W × 2
Stereo Power Amplifier
CX-M400EN
Right Speaker (More than 200W)
Left Speaker (More than 200W)
●TYPE II 200W + 100W × 2, 3-SPEAKER MODE:
Tape Player/Radio or CD Player
Graphic Equalizer
100W × 2
200W × 1
Stereo Power Amplifier
CX-M400EN
Right Speaker (More than 100W)
Left Speaker (More than 100W)
Center Speaker (More than 200W)
●TYPE III 100W × 4, 4-SPEAKER MODE:
Tape Player/Radio or CD Player
Graphic Equalizer
100W × 4
Stereo Power Amplifier
CX-M400EN
Right Front Speaker (More than 100W)
Left Front Speaker (More than 100W)
Right Rear Speaker (More than 100W)
Left Rear Speaker (More than 100W)

OPERATION

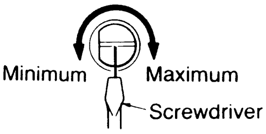
- This unit is automatically switched on and off if the power switch of the tape player/radio is turned on and off.
  The power indicator lights up when the tape player/radio is turned on.
- Due to its high power output and relative high current consumption, do not operate this amplifier when the engine is not running, otherwise, the car battery may be discharged and will fail to start.
- If abnormal conditions occur, the protector circuit activates and the audio output will not be heard. In this case, immediately switch off the power of the tape player/radio or /and shut the engine off of the car. Check the wiring connection and find out the cause. Operate the unit only after correcting the problem completely.
  Overload Protector Circuit: This circuit serves as a protection for the power amplifier when a short circuit occurs, such as in the speaker output terminal, etc.
  Heat Protector Circuit: This circuit serves as a protection to the power amplifier when temperature exceeds 100°C.





Level Adjustment (LEVEL ADJ.)

- If different types of speakers or amplifiers are used in a multi-amplifier system, the acoustical output from each speaker may not be balanced properly depending on the speaker's sensitivity and the amplifier's gain. In such case, use a flat-head screwdriver to adjust the level until the output from each speaker is balanced.



- When used with other components designed for amplifiers with lower sensitivity, reduce the amplifier's sensitivity by tuning the level adjustment counterclockwise.

BEFORE INSTALLING AND WIRING CONNECTION

- This equipment is designed to be used only in a 12-Volt, DC battery system with negative ground.
- Disconnect the negative side of the battery to prevent short-circuit during wiring.
- For installation of the unit, please consult your nearest Panasonic dealer.
- The speaker impedance should be 4~8 ohms. If the impedance is too large or too small, it affects the output and may result in damage to the speaker or this unit.
- The speaker cord and the power amplifier unit should be kept away (about 30cm apart) from the antenna and antenna extension cord when installing and making wiring connection.
- The recommended locations for installation are under the front seat or the parcel tray. However, avoid the following locations under any circumstances:
  - Near the car heaters or in the enclosed spaces (under the carpet or in the glove box) because of the poor ventilation.
  - On the floor near the doors, because the floor often gets wet. On the driver's floor because it hinders driving

CAUTION

- Use ungrounded speakers only.
- Do not ground any of the speaker leads.
- To prevent damage to unit be sure to follow the wire connections diagram at reverse side.
- Be sure to insulate exposed wiring so as to protect it from short-circuit if touched with some metal item.

NOTE

- The Power Extension Cord ③ should be kept away from the speaker leads.
- Connect the power leads after other connections are made.
- Be sure to connect the yellow power lead to the positive terminal (+) of the battery or fuse block (BAT) terminal.
- Please carefully read the operating instructions of the respective equipment before connecting it to this unit.

NOTE: For installation to cars equipped with trip or navigational computer. all electronic memory settings previously registered on the computer would fade out when the battery terminal is disconnected. For this type of cars, battery could not be disconnected (unless necessary) thus, wiring connection and installation of this unit should be carefully done short-circuit should be avoided.

INSTALLATION

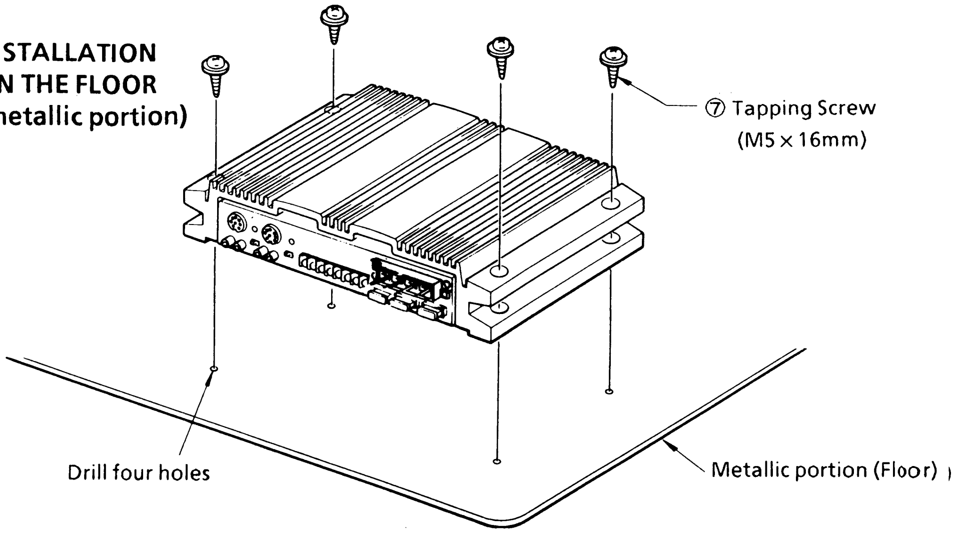
Installation Accessories

The unit is supplied with the following accessories:

No.	Item	Q'ty
①	Ground Lead (Black)	1
②	Main Power Lead (Yellow)	1
③	Power Extention Cord (Yellow)	1
④	Power Lead (Red)	1
⑤	Amp Relay Control Power Lead (Blue w/White Stripe)	1
⑥	DIN Extention Cord (16'4-13/16")	1

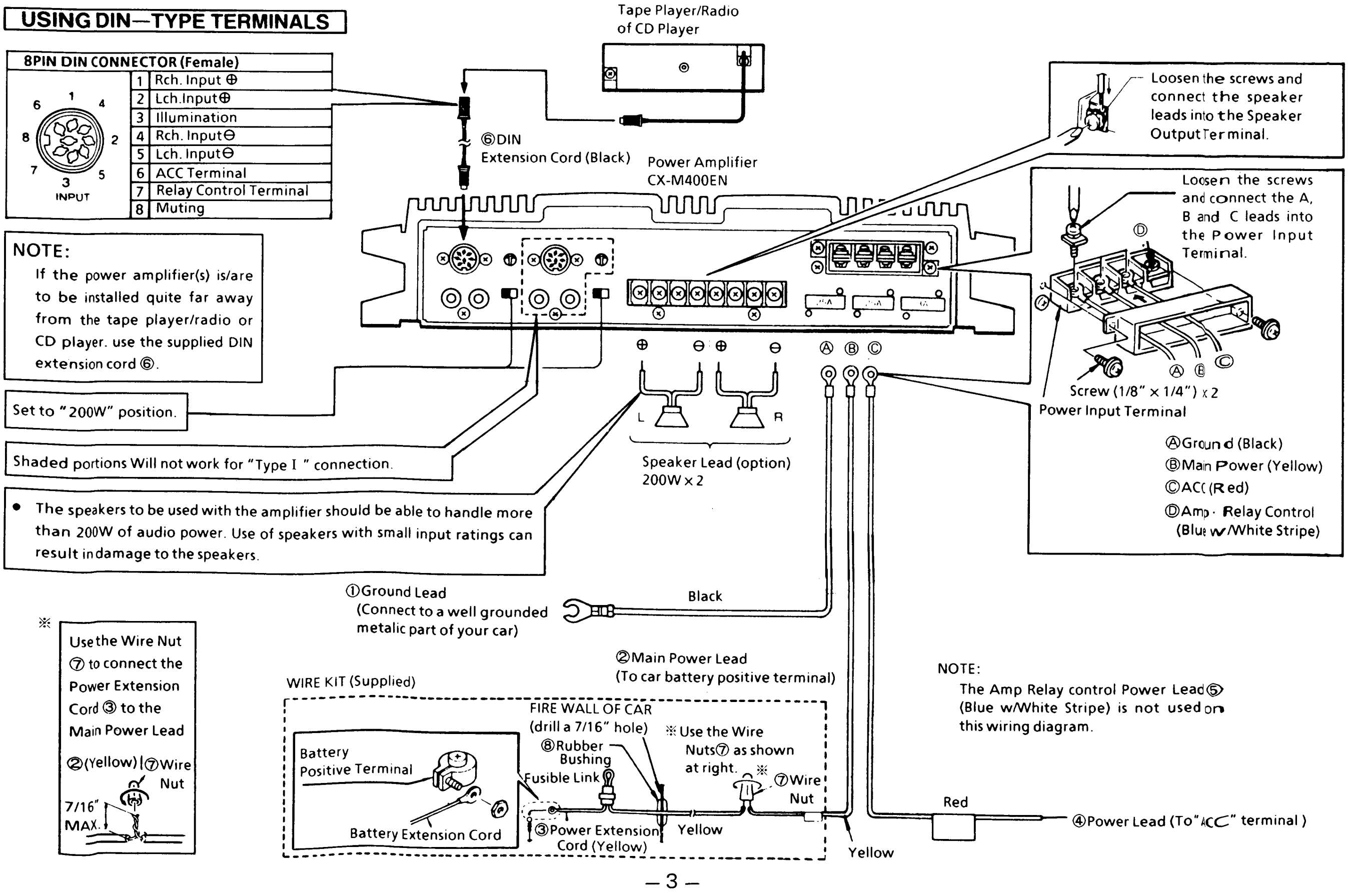
No.	Item	Q'ty
⑦	Wire Nut	1
⑧	Rubber Bushing	1
⑨	Tapping Screw (3/16" × 5/8")	4

Example: INSTALLATION ON THE FLOOR (metallic portion)


⑦ Tapping Screw
(M5 × 16mm)
Drill four holes
Metallic portion (Floor)

WIRING DISCRIPTION

USING DIN—TYPE TERMINALS


Tape Player/Radio
of CD Player
⑥DIN
Extension Cord (Black)
Power Amplifier
CX-M400EN
INPUT
⊕
⊖
⊕
⊖
L
R
Speaker Lead (option)
200W × 2
Ⓐ
Ⓑ
Ⓒ
Ⓓ
Screw (1/8" × 1/4") x 2
Power Input Terminal
Black
Red
Yellow
Yellow
WIRE KIT (Supplied)
FIRE WALL OF CAR
(drill a 7/16" hole)
⑧Rubber
Bushing
Fusible Link
Battery
Positive Terminal
Battery Extension Cord
③Power Extension
Cord (Yellow)
⑦Wire
Nut
②(Yellow)
⑦Wire
Nut
7/16"
MAX.

8PIN DIN CONNECTOR (Female)	
1	Rch. Input ⊕
2	Lch.Input⊕
3	Illumination
4	Rch. Input⊖
5	Lch. Input⊖
6	ACC Terminal
7	Relay Control Terminal
8	Muting

NOTE:
If the power amplifier(s) is/are to be installed quite far away from the tape player/radio or CD player. use the supplied DIN extension cord ⑥.

Set to "200W" position.

Shaded portions Will not work for "Type I " connection.

- The speakers to be used with the amplifier should be able to handle more than 200W of audio power. Use of speakers with small input ratings can result indamage to the speakers.

Loosen the screws and connect the speaker leads into the Speaker Output Terminal.

Loosen the screws and connect the A, B and C leads into the Power Input Terminal.

ⒶGround (Black)
ⒷMain Power (Yellow)
ⒸACC (Red)
ⒹAmp · Relay Control (Blue w/White Stripe)

①Ground Lead
(Connect to a well grounded metalic part of your car)

②Main Power Lead
(To car battery positive terminal)

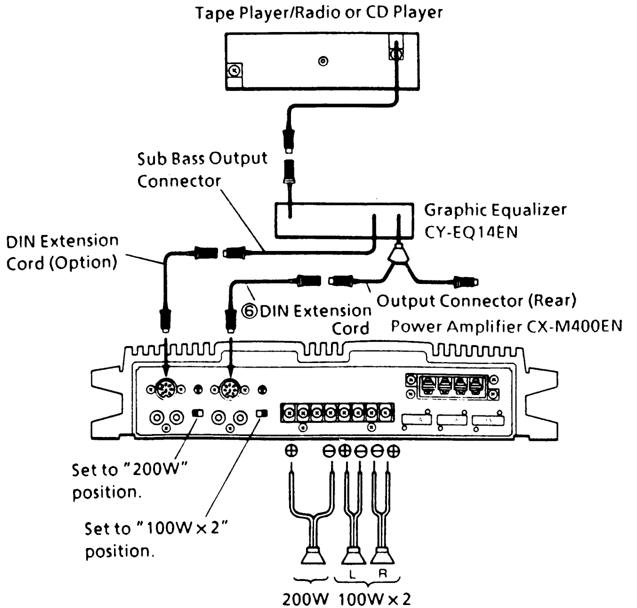
④Power Lead (To "ACC" terminal)

※ Use the Wire Nuts⑦ as shown at right.

※ Use the Wire Nut ⑦ to connect the Power Extension Cord ③ to the Main Power Lead

NOTE:
The Amp Relay control Power Lead⑤ (Blue w/White Stripe) is not used on this wiring diagram.

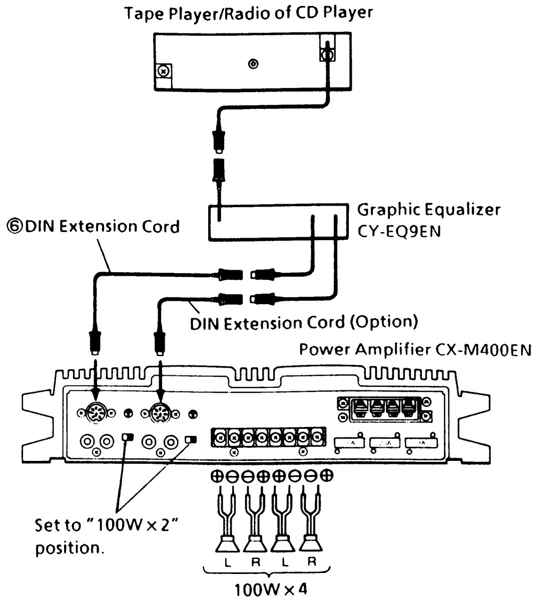
[TYPE II 200W + 100W × 2, 3-SPEAKER MODE]


Tape Player/Radio or CD Player
Sub Bass Output Connector
Graphic Equalizer CY-EQ14EN
DIN Extension Cord (Option)
⑥DIN Extension Cord
Output Connector (Rear)
Power Amplifier CX-M400EN
Set to "200W" position.
Set to "100W × 2" position.
⊕ ⊖⊕⊖⊕
L R
200W 100W × 2

- The speaker to be used with the amplifier should have more the 200W of maximum input.

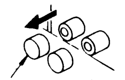
- The speakers to be used with the amplifier should have more than 100W of maximum input.

[TYPE III 100W × 4, 4-SPEAKER MODE]


Tape Player/Radio of CD Player
⑥DIN Extension Cord
Graphic Equalizer CY-EQ9EN
DIN Extension Cord (Option)
Power Amplifier CX-M400EN
Set to "100W × 2" position.
⊕⊖⊕⊖⊕⊖⊕⊖
L R L R
100W × 4

- The speakers to be used with the amplifier should be have more than 100W of maximum input.

- Use of speakers with small input ratings can result in damage to the speakers.


Insulating Cap

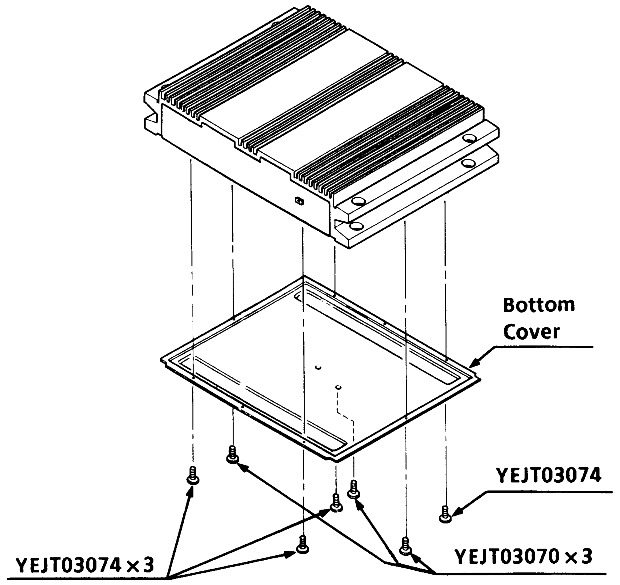
RCA Terminal (Insulalating Cap)

- When using the RCA terminal, remove these caps and connect the Pre-Amp Output Connector (RCA).
- Do not remove the caps unless necessary.

DISASSEMBLY INSTRUCTIONS

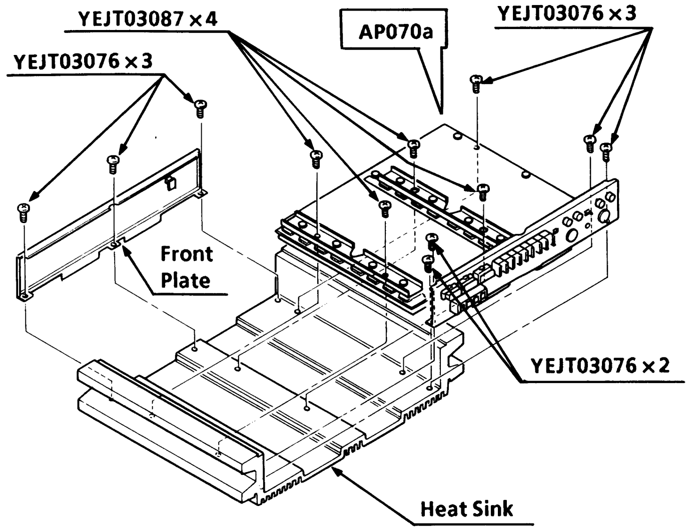
1) BOTTOM COVER REMOVAL

- Take out the seven screws.


Bottom Cover
YEJT03074
YEJT03074 × 3
YEJT03070 × 3

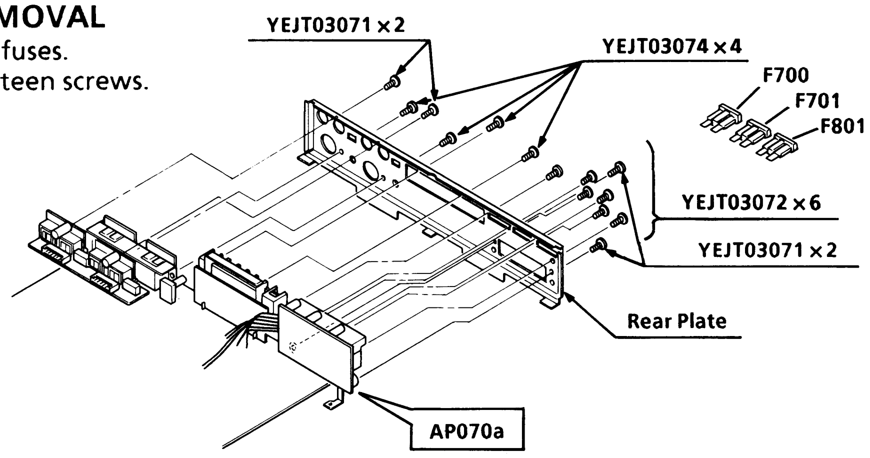
2) MAIN PCB (AP070a) AND FRONT PLATE REMOVAL

- Take out the twelve screws.


YEJT03087 × 4
AP070a
YEJT03076 × 3
YEJT03076 × 3
Front Plate
YEJT03076 × 2
Heat Sink

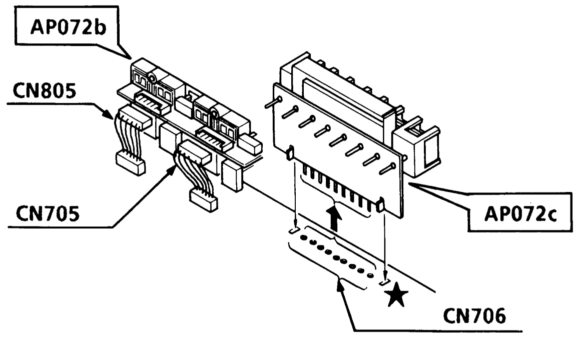
3) REAR PLATE REMOVAL

- Pullout the three fuses.
- Take out the fourteen screws.


YEJT03071 × 2
YEJT03074 × 4
F700
F701
F801
YEJT03072 × 6
YEJT03071 × 2
Rear Plate
AP070a

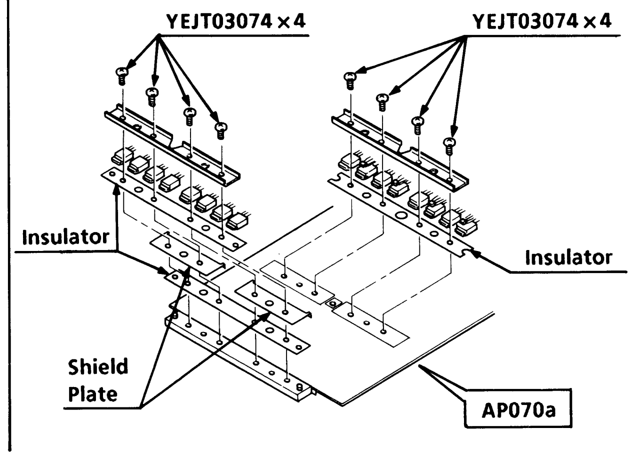
4) PCB (AP072b, c) REMOVAL

- Pull out the CN705, CN805 (AP072b)
- Remove the calkings (★ mark) (AP072c)
- Melt the solder of CN706


AP072b
CN805
CN705
AP072c
CN706
★

5) TRANSISTORS REMOVAL

- Take out the eight screws, then remove the PCB. (AP070a)


YEJT03074 × 4
YEJT03074 × 4
Insulator
Insulator
Shield Plate
AP070a

ALIGNMENT INSTRUCTIONS

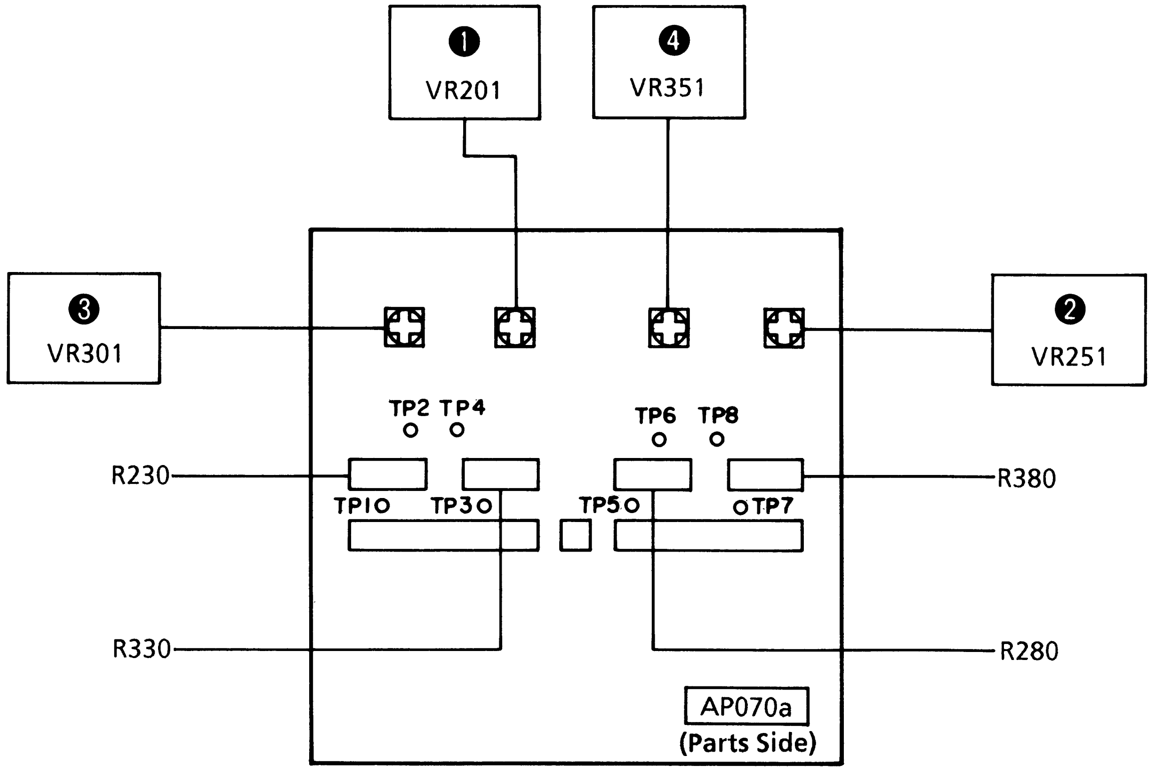
1. ALIGNMENT CONDITION.

- POWER SUPPLY : 14.4VDC
- LOAD : Open
- VR200, 300
VR250, 350 : Fully counterclockwise (Maximum)
- Connect a relay control lead and ACC input lead.
- SPEAKER SELECTOR : 200W
- SPEAKER IMPEDANCE : 4Ω ± 3%

2. AIDRING CURRENT ALIGNMENT.

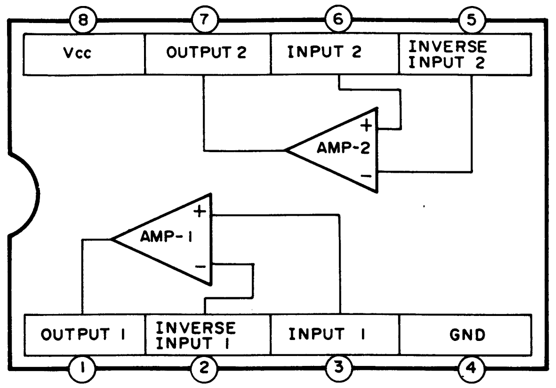
Step	Alignment Item	Channel	VTVM Connection	Adjust	Remarks
❶	Aidring Current	Rch	TP3 (+) TP4 (−)	VR201	● Adjust for 4 ± 2 mV ● Slowly rote VR201, 251 VR301, 351 ● Connect voltmater, so that it will happen patten short.
❷			TP7 (+) TP8 (−)	VR251	
❸		Lch	TP2 (+) TP1 (−)	VR301	
❹			TP6 (+) TP5 (−)	VR351	

3. AIDRING POINT.

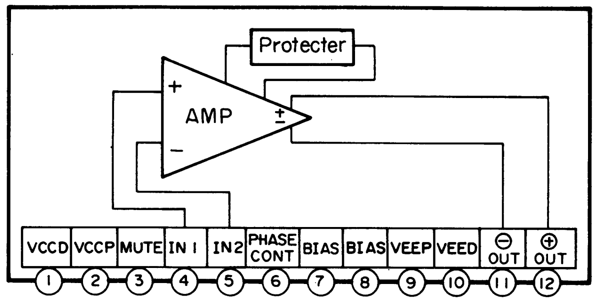

❶
VR201
❹
VR351
❸
VR301
❷
VR251
TP2 TP4
TP6 TP8
R230
R380
TP1
TP3
TP5
TP7
R330
R280
AP070a
(Parts Side)

IC BLOCK DIAGRAMS

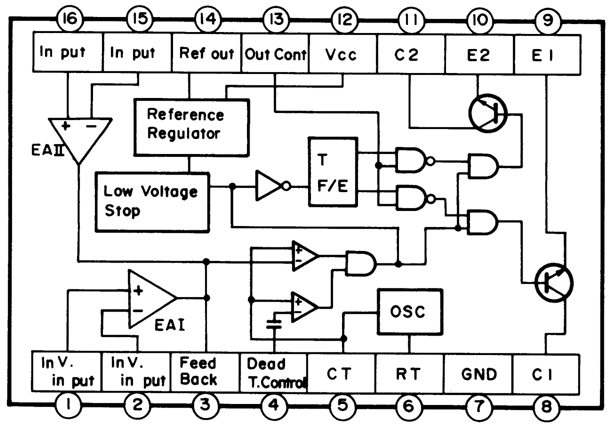
● YEAMUPC4570C (IC 200, 201, 300, 301)


8
7
6
5
Vcc
OUTPUT 2
INPUT 2
INVERSE INPUT 2
AMP-2
AMP-1
OUTPUT 1
INVERSE INPUT 1
INPUT 1
GND
1
2
3
4

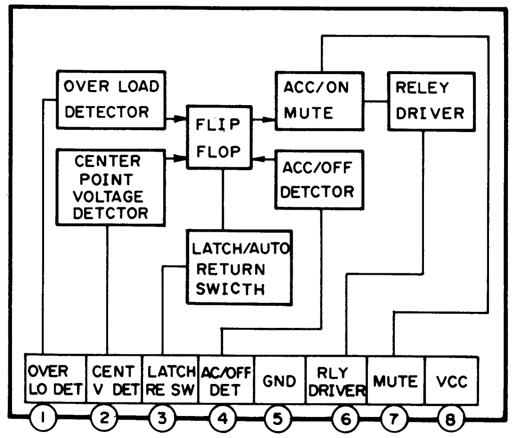
● YEAMUPC1270C (IC202, 252, 302, 352)


Protecter
AMP
VCCD
VCCP
MUTE
IN 1
IN2
PHASE CONT
BIAS
BIAS
VEEP
VEED
⊖ OUT
⊕ OUT
1
2
3
4
5
6
7
8
9
10
11
12

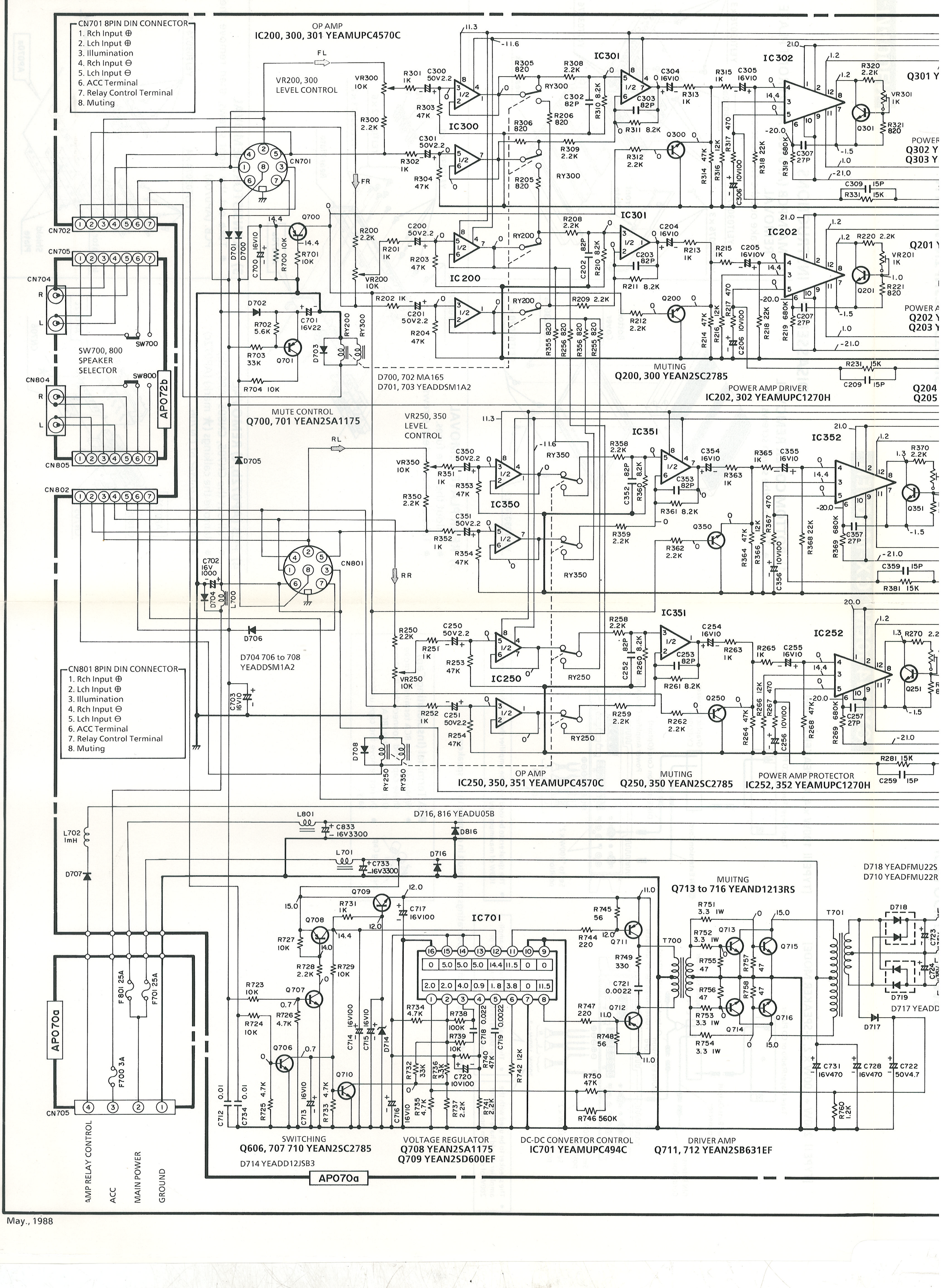
● YEAMUPC1237HA (IC700)


16
15
14
13
12
11
10
9
In put
In put
Ref out
Out Cont
Vcc
C2
E2
E1
EAII
Reference Regulator
Low Voltage Stop
T F/E
EAI
OSC
InV. in put
InV. in put
Feed Back
Dead T.Control
CT
RT
GND
C1
1
2
3
4
5
6
7
8

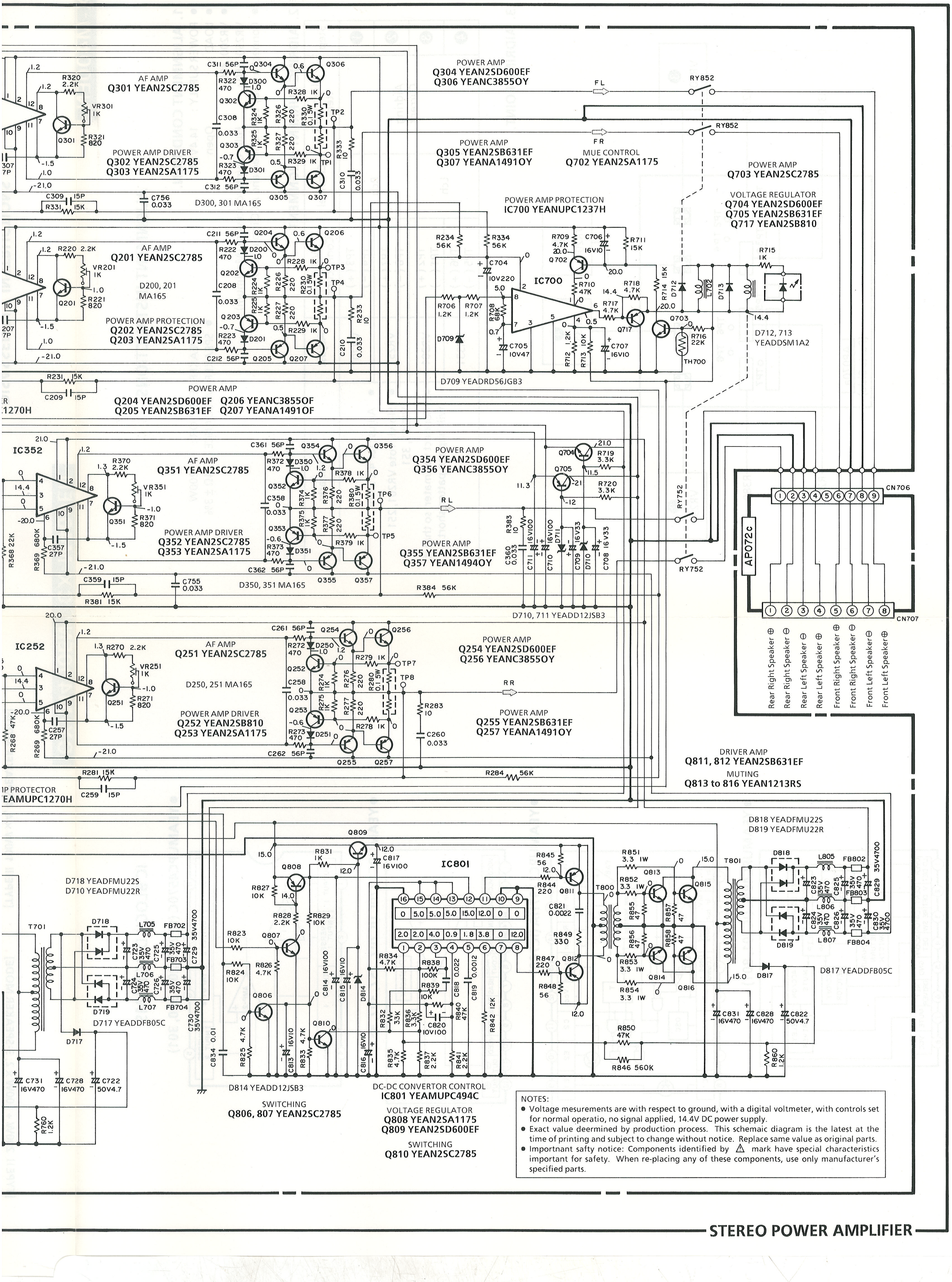
● YEAMUPC494C (IC701, 801)


OVER LOAD DETECTOR
CENTER POINT VOLTAGE DETCTOR
FLIP FLOP
ACC/ON MUTE
RELEY DRIVER
ACC/OFF DETCTOR
LATCH/AUTO RETURN SWICTH
OVER LO DET
CENT V DET
LATCH RE SW
AC/OFF DET
GND
RLY DRIVER
MUTE
VCC
1
2
3
4
5
6
7
8

SCHEMATIC DIAGRAM MODEL CX-M400EN

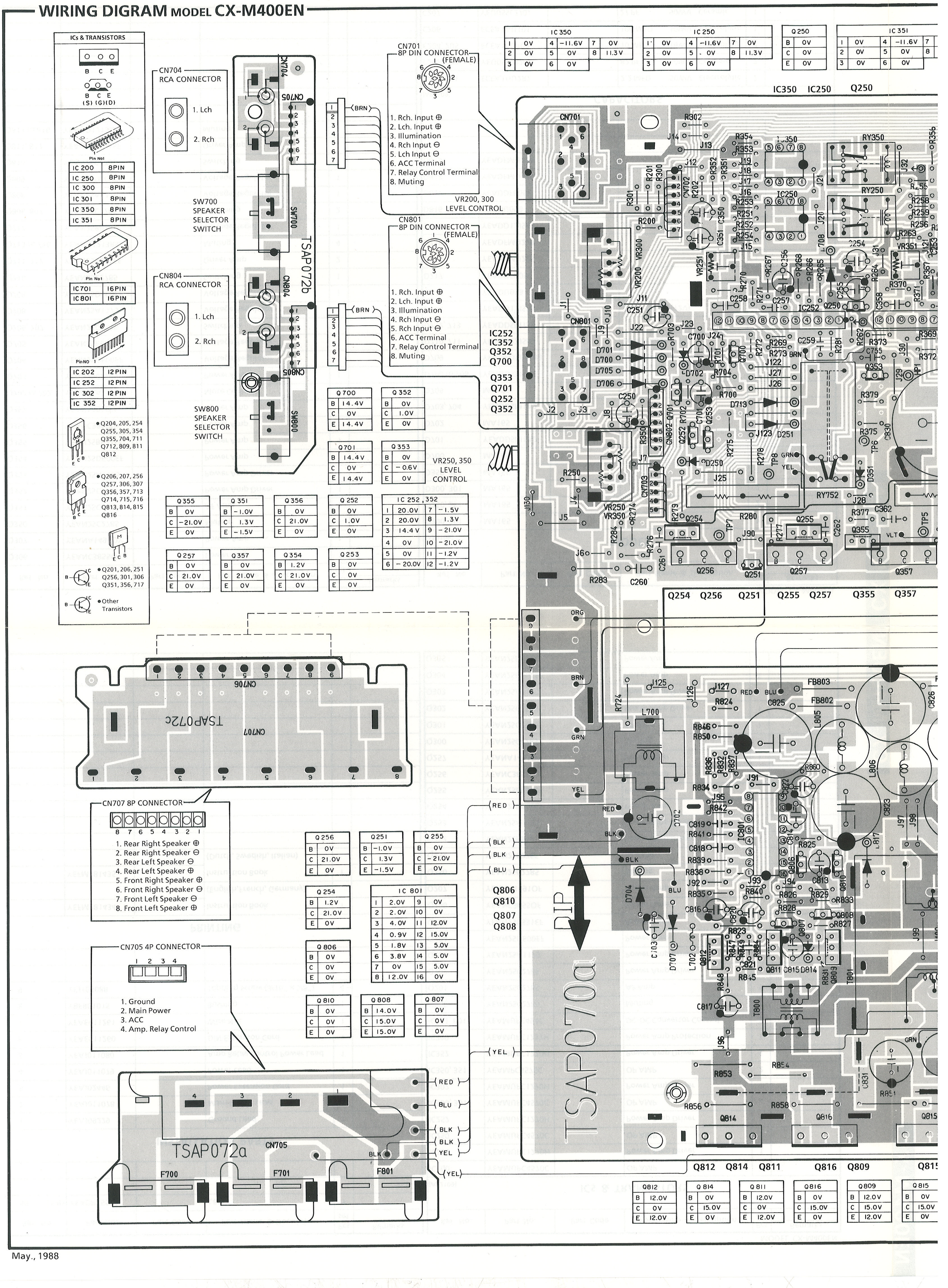

CN701 8PIN DIN CONNECTOR
1. Rch Input ⊕
2. Lch Input ⊕
3. Illumination
4. Rch Input ⊖
5. Lch Input ⊖
6. ACC Terminal
7. Relay Control Terminal
8. Muting
OP AMP
IC200, 300, 301 YEAMUPC4570C
VR200, 300
LEVEL CONTROL
FL
FR
RL
RR
IC300
IC301
IC302
IC200
IC202
Q301
Q201
POWER
Q302
Q303
Q202
Q203
Q204
Q205
MUTING
Q200, 300 YEAN2SC2785
POWER AMP DRIVER
IC202, 302 YEAMUPC1270H
CN702
CN705
CN704
SW700
SW700, 800
SPEAKER
SELECTOR
SW800
CN804
AP072b
CN805
CN802
D700, 702 MA165
D701, 703 YEADDSM1A2
MUTE CONTROL
Q700, 701 YEAN2SA1175
VR250, 350
LEVEL
CONTROL
IC351
IC352
IC350
IC250
IC252
Q351
Q251
CN801
D704 706 to 708
YEADDSM1A2
CN801 8PIN DIN CONNECTOR
1. Rch Input ⊕
2. Lch Input ⊕
3. Illumination
4. Rch Input ⊖
5. Lch Input ⊖
6. ACC Terminal
7. Relay Control Terminal
8. Muting
OP AMP
IC250, 350, 351 YEAMUPC4570C
MUTING
Q250, 350 YEAN2SC2785
POWER AMP PROTECTOR
IC252, 352 YEAMUPC1270H
L801
C833 16V3300
D716, 816 YEADU05B
D816
L702 1mH
D707
L701
C733 16V3300
D716
D718 YEADFMU22S
D710 YEADFMU22R
MUITNG
Q713 to 716 YEAND1213RS
IC701
T700
T701
D718
D719
D717
AP070a
F801 25A
F701 25A
F700 3A
CN705
SWITCHING
Q606, 707 710 YEAN2SC2785
VOLTAGE REGULATOR
Q708 YEAN2SA1175
Q709 YEAN2SD600EF
DC-DC CONVERTOR CONTROL
IC701 YEAMUPC494C
DRIVER AMP
Q711, 712 YEAN2SB631EF
D714 YEADD12JSB3
AMP RELAY CONTROL
ACC
MAIN POWER
GROUND

May., 1988


POWER AMP
Q304 YEAN2SD600EF
Q306 YEANC3855OY
AF AMP
Q301 YEAN2SC2785
POWER AMP DRIVER
Q302 YEAN2SC2785
Q303 YEAN2SA1175
D300, 301 MA165
POWER AMP
Q305 YEAN2SB631EF
Q307 YEANA1491OY
MUE CONTROL
Q702 YEAN2SA1175
POWER AMP
Q703 YEAN2SC2785
VOLTAGE REGULATOR
Q704 YEAN2SD600EF
Q705 YEAN2SB631EF
Q717 YEAN2SB810
POWER AMP PROTECTION
IC700 YEANUPC1237H
FL
FR
RY852
AF AMP
Q201 YEAN2SC2785
D200, 201
MA165
POWER AMP PROTECTION
Q202 YEAN2SC2785
Q203 YEAN2SA1175
POWER AMP
Q204 YEAN2SD600EF
Q205 YEAN2SB631EF
Q206 YEANC3855OF
Q207 YEANA1491OF
IC700
D709 YEADRD56JGB3
D712, 713
YEADDSM1A2
TH700
IC352
AF AMP
Q351 YEAN2SC2785
POWER AMP DRIVER
Q352 YEAN2SC2785
Q353 YEAN2SA1175
D350, 351 MA165
POWER AMP
Q354 YEAN2SD600EF
Q356 YEANC3855OY
POWER AMP
Q355 YEAN2SB631EF
Q357 YEAN1494OY
RL
RY752
D710, 711 YEADD12JSB3
CN706
AP072c
CN707
Rear Right Speaker ⊕
Rear Right Speaker ⊖
Rear Left Speaker ⊖
Rear Left Speaker ⊕
Front Right Speaker ⊕
Front Right Speaker ⊖
Front Left Speaker ⊖
Front Left Speaker ⊕
IC252
AF AMP
Q251 YEAN2SC2785
D250, 251 MA165
POWER AMP DRIVER
Q252 YEAN2SB810
Q253 YEAN2SA1175
POWER AMP
Q254 YEAN2SD600EF
Q256 YEANC3855OY
POWER AMP
Q255 YEAN2SB631EF
Q257 YEANA1491OY
RR
IP PROTECTOR
YEAMUPC1270H
DRIVER AMP
Q811, 812 YEAN2SB631EF
MUTING
Q813 to 816 YEAN1213RS
D818 YEADFMU22S
D819 YEADFMU22R
D817 YEADDFB05C
T800
T801
IC801
D718 YEADFMU22S
D710 YEADFMU22R
T701
D717 YEADDFB05C
D814 YEADD12JSB3
SWITCHING
Q806, 807 YEAN2SC2785
DC-DC CONVERTOR CONTROL
IC801 YEAMUPC494C
VOLTAGE REGULATOR
Q808 YEAN2SA1175
Q809 YEAN2SD600EF
SWITCHING
Q810 YEAN2SC2785

NOTES:
- Voltage mesurements are with respect to ground, with a digital voltmeter, with controls set for normal operatio, no signal applied, 14.4V DC power supply.
- Exact value deermined by production process. This schemaic diagram is the latest at the time of printing and subject to change without notice. Replace same value as original parts.
- Importnant safty notice: Components identified by ⚠ mark have special characteristics important for safety. When re-placing any of these components, use only manufacturer's specified parts.

WIRING DIGRAM MODEL CX-M400EN


CN701
CN702
CN703
CN704
CN705
CN706
CN707
CN801
CN802
CN804
CN805
SW700
SW800
TSAP072b
TSAP072c
TSAP072a
TSAP070a
F700
F701
F801
RY350
RY250
RY752
IC350
IC250
IC252
IC801
VR200
VR300
VR250
VR350
T800
T801
FB802
FB803
L700
RIP
RED
BLU
BLK
YEL
GRN
ORG
BRN
IC350 IC250 Q250
IC252 IC352 Q352 Q700 Q353 Q701 Q252 Q352
Q254 Q256 Q251 Q255 Q257 Q355 Q357
Q806 Q810 Q807 Q808
Q812 Q814 Q811 Q816 Q809 Q815

ICs & TRANSISTORS

B C E

B C E
(S) (G) (D)

Pin No1

IC 200	8PIN
IC 250	8PIN
IC 300	8PIN
IC 301	8PIN
IC 350	8PIN
IC 351	8PIN

Pin No1

IC701	16PIN
IC801	16PIN

PinNO 1

IC 202	12PIN
IC 252	12PIN
IC 302	12PIN
IC 352	12PIN

- ●Q204, 205, 254 Q255, 305, 354 Q355, 704, 711 Q712, 809, 811 Q812
- ●Q206, 207, 256 Q257, 306, 307 Q356, 357, 713 Q714, 715, 716 Q813, 814, 815 Q816
- ●Q201, 206, 251 Q256, 301, 306 Q351, 356, 717
- ●Other Transistors

CN704
RCA CONNECTOR
1. Lch
2. Rch

SW700
SPEAKER
SELECTOR
SWITCH

CN804
RCA CONNECTOR
1. Lch
2. Rch

SW800
SPEAKER
SELECTOR
SWITCH

CN701
8P DIN CONNECTOR
(FEMALE)

1. Rch. Input ⊕
2. Lch. Input ⊕
3. Illumination
4. Rch Input ⊖
5. Lch Input ⊖
6. ACC Terminal
7. Relay Control Terminal
8. Muting

VR200, 300
LEVEL CONTROL

CN801
8P DIN CONNECTOR
(FEMALE)

1. Rch. Input ⊕
2. Lch. Input ⊕
3. Illumination
4. Rch Input ⊖
5. Rch Input ⊖
6. ACC Terminal
7. Relay Control Terminal
8. Muting

VR250, 350
LEVEL
CONTROL

IC 350					
1	0V	4	−11.6V	7	0V
2	0V	5	0V	8	11.3V
3	0V	6	0V		

IC 250					
1	0V	4	−11.6V	7	0V
2	0V	5	0V	8	11.3V
3	0V	6	0V		

Q 250	
B	0V
C	0V
E	0V

IC 351				
1	0V	4	−11.6V	7
2	0V	5	0V	8
3	0V	6	0V	

Q 700	
B	14.4V
C	0V
E	14.4V

Q 352	
B	0V
C	1.0V
E	0V

Q701	
B	14.4V
C	0V
E	14.4V

Q 353	
B	0V
C	− 0.6V
E	0V

Q 355	
B	0V
C	−21.0V
E	0V

Q 351	
B	−1.0V
C	1.3V
E	−1.5V

Q 356	
B	0V
C	21.0V
E	0V

Q 252	
B	0V
C	1.0V
E	0V

IC 252, 352			
1	20.0V	7	−1.5V
2	20.0V	8	1.3V
3	14.4V	9	−21.0V
4	0V	10	−21.0V
5	0V	11	−1.2V
6	−20.0V	12	−1.2V

Q 257	
B	0V
C	21.0V
E	0V

Q 357	
B	0V
C	21.0V
E	0V

Q 354	
B	1.2V
C	21.0V
E	0V

Q 253	
B	0V
C	0V
E	0V

CN707 8P CONNECTOR

8 7 6 5 4 3 2 1

1. Rear Right Speaker ⊕
2. Rear Right Speaker ⊖
3. Rear Left Speaker ⊖
4. Rear Left Speaker ⊕
5. Front Right Speaker ⊕
6. Front Right Speaker ⊖
7. Front Left Speaker ⊖
8. Front Left Speaker ⊕

CN705 4P CONNECTOR

1 2 3 4

1. Ground
2. Main Power
3. ACC
4. Amp. Relay Control

Q 256	
B	0V
C	21.0V
E	0V

Q 251	
B	−1.0V
C	1.3V
E	−1.5V

Q 255	
B	0V
C	−21.0V
E	0V

Q 254	
B	1.2V
C	21.0V
E	0V

IC 801			
1	2.0V	9	0V
2	2.0V	10	0V
3	4.0V	11	12.0V
4	0.9V	12	15.0V
5	1.8V	13	5.0V
6	3.8V	14	5.0V
7	0V	15	5.0V
8	12.0V	16	0V

Q 806	
B	0V
C	0V
E	0V

Q 810	
B	0V
C	0V
E	0V

Q 808	
B	14.0V
C	15.0V
E	15.0V

Q 807	
B	0V
C	0V
E	0V

Q812	
B	12.0V
C	0V
E	12.0V

Q 814	
B	0V
C	15.0V
E	0V

Q 811	
B	12.0V
C	0V
E	12.0V

Q816	
B	0V
C	15.0V
E	0V

Q809	
B	12.0V
C	15.0V
E	12.0V

Q 815	
B	0V
C	15.0V
E	0V

May., 1988

IC 351					
1	0V	4	-11.6V	7	0V
2	0V	5	0V	8	11.3V
3	0V	6	0V		

Q350	
B	0V
C	0V
E	0V

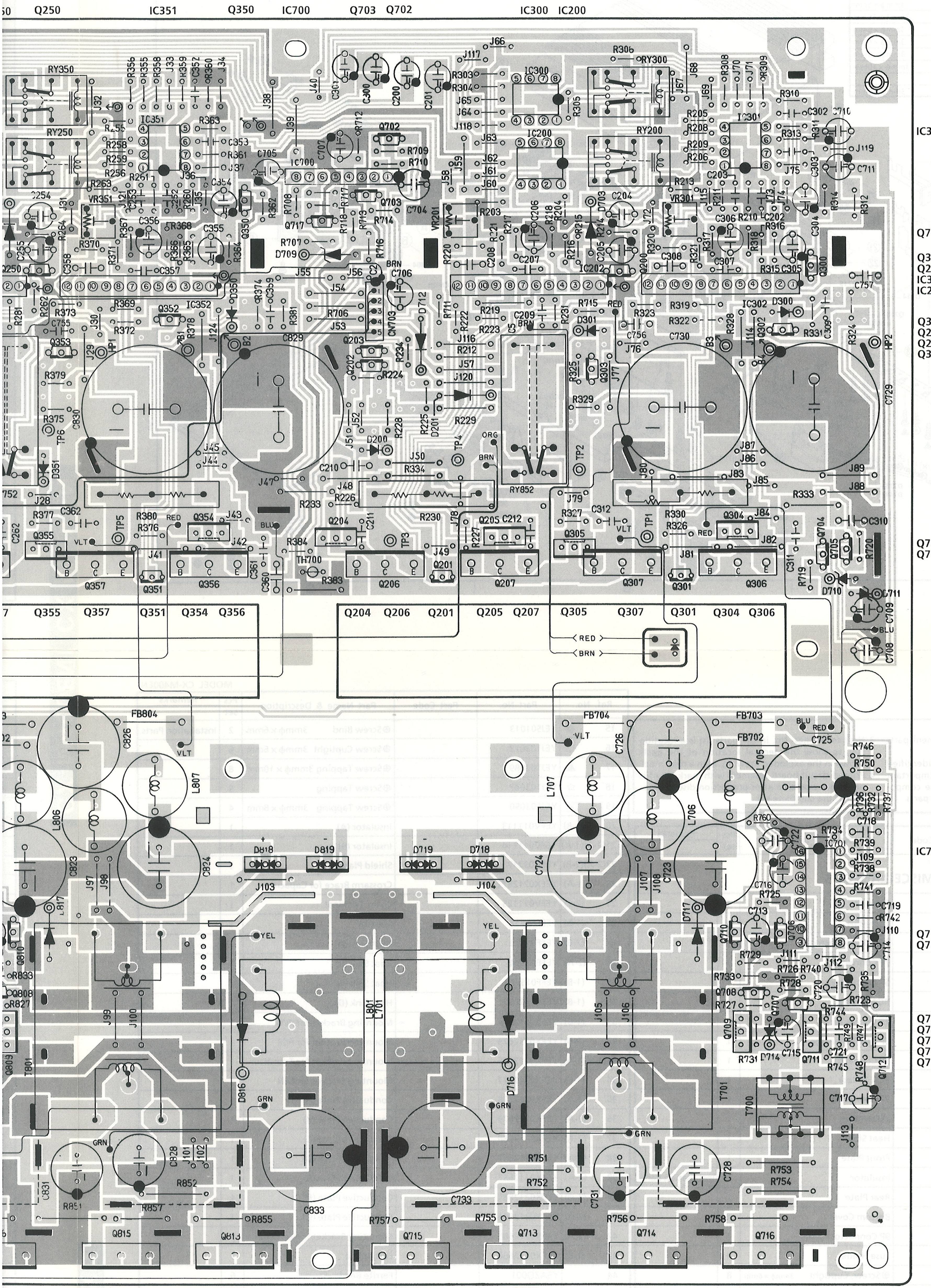
IC700					
1	0V	4	0V	7	0.7V
2	0V	5	0V	8	5.0V
3	0V	6	0.5V		

Q703	
B	0V
C	20.0V
E	0V

Q702	
B	20.0V
C	0V
E	20.0V

IC 300					
1	0V	4	-11.6V	7	0V
2	0V	5	0V	8	11.3V
3	0V	6	0V		

IC 200					
1	0V	4	-11.6V	7	0V
2	0V	5	0V	8	11.3V
3	0V	6	0V		



Q250
IC351
Q350
IC700
Q703
Q702
IC300
IC200
IC301
Q717
Q300
Q200
IC302
IC202
Q302
Q203
Q202
Q303
Q704
Q705
Q355
Q357
Q351
Q354
Q356
Q204
Q206
Q201
Q205
Q207
Q305
Q307
Q301
Q304
Q306
IC701
Q710
Q706
Q708
Q707
Q709
Q711
Q712
Q809
Q815
Q813
Q715
Q713
Q714
Q716
RY350
RY250
RY300
RY200
RY852
C829
C830
C730
C729
C833
C733
FB804
FB704
FB703
FB702
L806
L807
L707
L706
L705
T801
T701
T700
D818
D819
D719
D718
RED
BRN
BLU
VLT
YEL
GRN
ORG

IC301	
1	0V
2	0V
3	0V
4	-11.6V
5	0V
6	0V
7	0V
8	11.3V

Q 717	
B	2.3V
C	0V
E	2.3V

Q 200	
B	0V
C	0V
E	0V

Q 300	
B	0V
C	0V
E	0V

IC 302	
1	20.0V
2	20.0V
3	14.4V
4	0V
5	0V
6	-20.0V
7	-1.5V
8	1.2V
9	-21.0V
10	-21.0V
11	-1.0V
12	1.2V

IC 202	
1	20.0V
2	20.0V
3	14.4V
4	0V
5	0V
6	-20.0V
7	-1.5V
8	1.2V
9	-21.0V
10	-21.0V
11	-1.0V
12	1.2V

Q 302	
B	0V
C	-0.7V
E	0V

Q 203	
B	0V
C	-0.7V
E	0V

Q 202	
B	0V
C	1.0V
E	0V

Q 303	
B	0V
C	1.0V
E	0V

Q 704	
B	15V
C	20.0V
E	11.3V

Q 705	
B	-12.0V
C	-21.0V
E	-12.0V

Q 204	
B	0V
C	21.0V
E	0V

Q 206	
B	0.6V
C	21.0V
E	0V

Q 201	
B	-1.0V
C	1.3V
E	-1.5V

Q 205	
B	0V
C	-21.0V
E	0V

Q 207	
B	0.5V
C	-21.0V
E	0V

Q 305	
B	0V
C	0V
E	0V

Q 307	
B	0.5V
C	-21.0V
E	0V

Q 301	
B	-1.0V
C	1.3V
E	-1.5V

Q 304	
B	0V
C	21.0V
E	0V

Q 306	
B	0.6V
C	21.0V
E	0V

IC 701			
1	2.0V	9	0V
2	2.0V	10	0V
3	4.0V	11	11.5V
4	0.9V	12	14.4V
5	1.8V	13	5.0V
6	3.8V	14	5.0V
7	0V	15	5.0V
8	11.5V	16	0V

Q 710	
B	0.7V
C	0V
E	0V

Q 706	
B	0V
C	0.7V
E	0V

Q 708	
B	14.0V
C	14.4V
E	15.0V

Q 707	
B	0.7V
C	0V
E	0V

Q 709	
B	12.0V
C	15.0V
E	12.0V

Q 711	
B	12.0V
C	0V
E	11.0V

Q 712	
B	11.0V
C	0V
E	11.0V

Q809	
B	12.0V
C	15.0V
E	12.0V

Q815	
B	0V
C	15.0V
E	0V

Q813	
B	0V
C	15.0V
E	0V

Q715	
B	0V
C	15.5V
E	0V

Q713	
B	0V
C	15.0V
E	0V

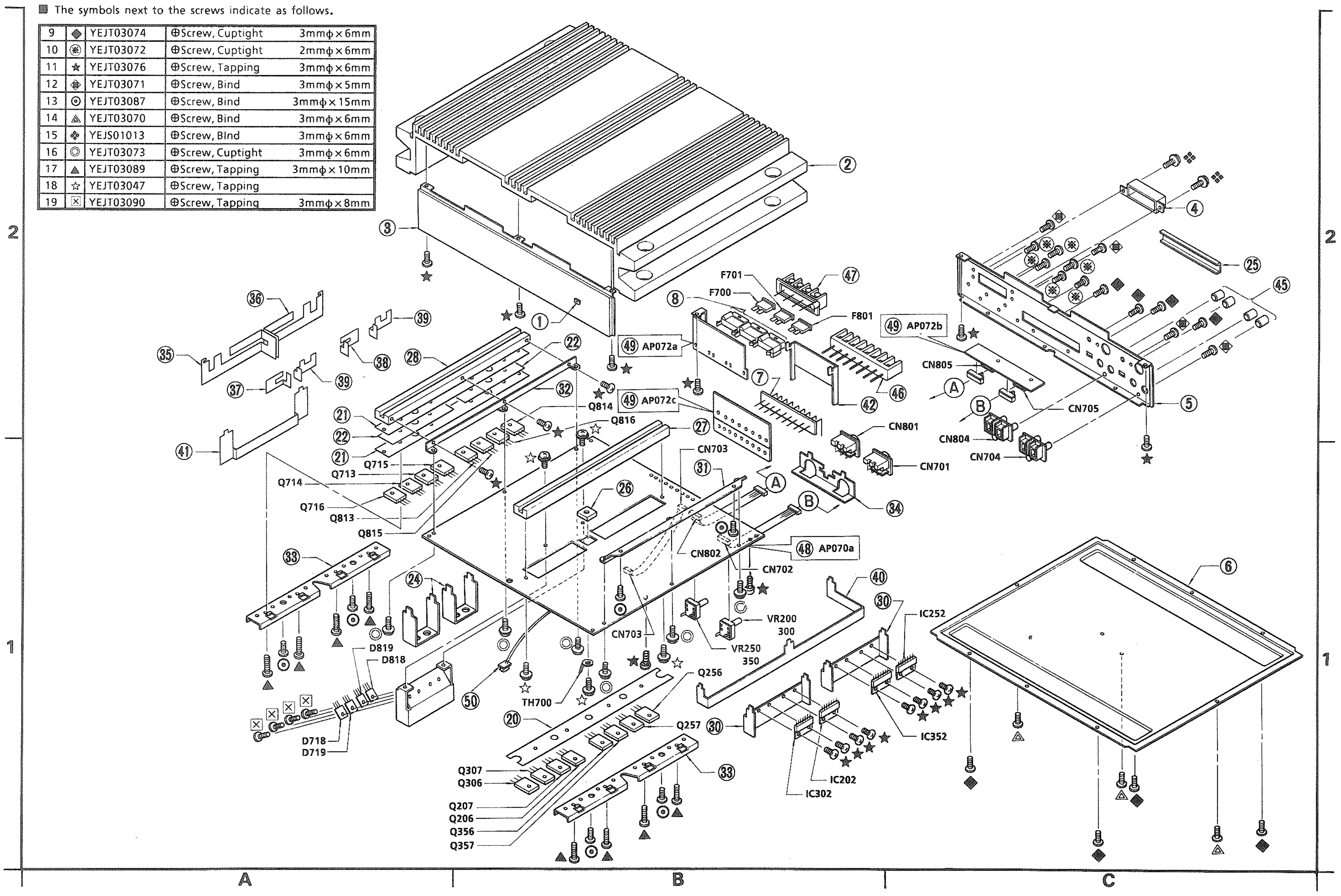
Q 714	
B	0V
C	15.0V
E	0V

Q 716	
B	0V
C	15.0V
E	0V

STEREO POWER AMPLIFIER

EXPLODED VIEW

■ Numbers in ○ are indicated REF. No. in the REPLACEMENT PARTS LIST.


■ The symbols next to the screws indicate as follows.

9	◆	YEJT03074	⊕Screw, Cuptight	3mmϕ × 6mm
10	⊛	YEJT03072	⊕Screw, Cuptight	2mmϕ × 6mm
11	★	YEJT03076	⊕Screw, Tapping	3mmϕ × 6mm
12	◈	YEJT03071	⊕Screw, Bind	3mmϕ × 5mm
13	⊙	YEJT03087	⊕Screw, Bind	3mmϕ × 15mm
14	△	YEJT03070	⊕Screw, Bind	3mmϕ × 6mm
15	❖	YEJS01013	⊕Screw, Bind	3mmϕ × 6mm
16	◎	YEJT03073	⊕Screw, Cuptight	3mmϕ × 6mm
17	▲	YEJT03089	⊕Screw, Tapping	3mmϕ × 10mm
18	☆	YEJT03047	⊕Screw, Tapping	
19	☒	YEJT03090	⊕Screw, Tapping	3mmϕ × 8mm

Replacement Parts List
Model NO. CX-M400EN

NOTES :

1. Be sure to make your orders of replacement parts according to this list.
2. Important safety notice : Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. Next to the Ref. No. in the parts list is a location key, to show the general location of the parts shown in the exploded drawing, as in a road map.
4. Printed circuit board assembly with mark (NLA) is no longer available after production discontinuation of the complete set.

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
			MISCELLANEOUS		
⚠F700 (2-B)	YEAF01017		Fuse, 3A	1	
⚠F701, 801	YEAF01022		Fuse, 25A	2	
CN701 (1-B)	YEAE011155		8P DIN Connector	1	
CN702 (1-B)	YEAE011262		7P Connector	1	
CN703 (1-B)	YEAE011263		5P Connector	1	
CN704 (1-C)	YEAE02132		RCA 2P Jack	1	
CN705 (2-C)	YEAE011264		7P Connector	1	
CN801 (2-C)	YEAE011155		8P DIN Connector	1	
CN802 (1-B)	YEAE011262		7P Connector	1	
CN804 (1-C)	YEAE02132		RCA 2P Jack	1	
CN805 (2-C)	YEAE011264		7P Connector	1	
1 (2-B)	YEFK04506		LED Holder	1	
2 (2-B)	YEFF01570		Heat Sink	1	
3 (2-A)	YEFA07209		Front Plate	1	
4 (2-C)	YEFV011111		Insulator	1	Installation Parts
5 (2-C)	YEFA08312		Rear Plate	1	
6 (1-C)	YEFA05414		Bottom Cover	1	
7 (2-B)	YEAE011265		9P Connector	1	
8 (2-B)	YEFK02056		Fuse Holder	1	
9 ◆	YEJT03074		⊕Screw, Cuptight 3mmϕ × 6mm	8	
10 ⊛	YEJT03072		⊕Screw, Cuptight 2mmϕ × 6mm	6	
11 ★	YEJT03076		⊕Screw, Tapping 3mmϕ × 6mm	11	
12 ◈	YEJT03071		⊕Screw, Bind 3mmϕ × 5mm	4	
13 ⊙	YEJT03087		⊕Screw, Bind 3mmϕ × 15mm	4	
14 △	YEJT03070		⊕Screw, Bind 3mmϕ × 6mm	3	
15 ❖	YEJS01013		⊕Screw Bind 3mmϕ × 6mm	2	Installation Parts
16 ◎	YEJT03073		⊕Screw Cuptight 3mmϕ × 6mm	6	
17 ▲	YEJT03089		⊕Screw Tapping 3mmϕ × 10mm	8	
18 ☆	YEJT03047		⊕Screw Tapping	5	
19 ☒	YEJT03090		⊕Screw Tapping 3mmϕ × 8mm	4	
20 (1-B)	YEFV011113		Insulator (A)	1	
21(2-A)(1-A)	YEFV011114		Insulator (B)	1	
22(2-A)(2-B)	YEFV03217		Shield Plate	1	
24 (1-A)	YEFX0212672		Crossarm Brace for Capacitor	1	
25 (2-C)	YEFV011125		Cover Terminal	1	
26 (1-B)	YEFL02458		Speacer	1	
27 (2-B)	YEFF01573		Heat Sink (A)	1	
28 (2-A)	YEFF01574		Heat Sink (B)	1	
29 (1-B)	YEFF01575		Heat Sink (C)	1	
30 (1-B)	YEFF01576		Heat Sink (D)	1	
31 (1-B)	YEFX0212674		Mounting Bracket for PCB	1	
32 (2-B)	YEFX0212675		Mounting Bracket for PCB	1	
33(1-B)(1-A)	YEFX0212676		Mounting Bracket for Transistor	1	
34 (1-C)	YEFX0212677		Mounting Bracket for DIN	1	
35 (2-A)	YEFX0212678		Conductive Plate (A)	1	
36 (2-A)	YEFX0212679		Conductive Plate (B)	1	
37 (2-A)	YEFX0212680		Conductive Plate (C)	1	
38 (2-A)	YEFX0212681		Conductive Plate (D)	1	
39 (2-A)	YEFX0212682		Conductive Plate (E)	1	
40 (2-A)	YEFX0212683		Conductive Plate (F)	1	
41 (2-A)	YEFX0212684		Conductive Plate (G)	1	
42 (2-A)	YEFX0212685		Mounting Bracket for Terminal	1	
43 (1-B)	YEFX0212686		Earth Plate	1	
44	YEAZQ001		Ferrite Bead	6	
45 (2-C)	YEFS04417		Cap	1	
46 (2-C)	YEAT03344		Speaker Terminal	1	
47 (2-B)	YEAT03345		Power Terminal	1	
48 (1-B)	YEP0PT2109A0		PCB w/Component	1	NLA (AP070)
49	YEAP2117		PCB	1	(AP072)

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
50 (1-B)	YEADPR5531		LED	1	

INSTALLATION PARTS

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
1	YEAJ09229		Ground Lead	1	
2	YEAJ011078		Main Power Lead	1	
3	YEAJ02446		Power Extension Cord	1	
4	YEAJ011079		Power Lead	1	
5	YEAJ011080		Amp Relay Control Power Lead	1	
6	YEAE011260		DIN Extension Cord	1	
7	YEAE011261		Wire Nut	1	
8	YBFR01015		Bushing	1	
9	YEJT03088		Tapping Screw (3/16" x 5/8")	4	

PRINTING

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
	YEFM281434		Instruction Book (English,French, Germany)	1	
	YEFM281435		Instruction Book (Dutch, Swedish, Italian)	1	

[AP2109]

ICs & TRANSISTORS

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
IC200	YEAMUPC4570C		OP AMP	1	
IC202	YEAMUPC1270H		Power Amp Driver	1	
IC250	YEAMUPC4570C		OP AMP	1	
IC252	YEAMUPC1270H		Power Amp Driver	1	
IC300, 301	YEAMUPC4570C		OP AMP	2	
IC302	YEAMUPC1270H		Power Amp Driver	1	
IC350, 351	YEAMPC4570C		OP AMP	2	
IC352	YEAMUPC1270H		Power Amp Driver	1	
IC700	YEAMUPC1237H		Power Amp Protection	1	
IC701, 801	YEAMUPC494C		DC-DC Convertor Control	2	
Q200	YEAN2SC2785		Muting	1	
Q201	YEAN2SC2785		AF Amp	1	
Q202	YEAN2SC2785		Power Amp Driver	1	
Q203	YEAN2SA1175		Power Amp Driver	1	
Q204	YEAN2SD600EF		Power Amp	1	
Q205	YEAN2SB631EF		Power Amp	1	
Q206	YEANC3855OF		Power Amp	1	
Q207	YEANA1491OF		Power Amp	1	
Q250	YEAN2SC2785		Muting	1	
Q251	YEAN2SC2785		AF Amp	1	
Q252	YEAN2SB810		Power Amp Driver	1	
Q253	YEAN2SA1175		Power Amp Driver	1	
Q254	YEAN2SD600EF		Power Amp	1	
Q255	YEAN2SB631EF		Power Amp	1	
Q256	YEANC3855OY		Power Amp	1	
Q257	YEANA1491OY		Power Amp	1	
Q300	YEAN2SC2785		Muting	1	
Q301	YEAN2SC2785		AF Amp	1	
Q302	YEAN2SC2785		Power Amp Driver	1	
Q303	YEAN2SA1175		Power Amp Driver	1	
Q304	YEAN2SD600EF		Power Amp	1	
Q305	YEAN2SB631EF		Power Amp	1	

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
Q306	YEANC3855OY		Power Amp	1	
Q307	YEANA1491OY		Power Amp	1	
Q350	YEAN2SC2785		Muting	1	
Q351	YEAN2SC2785		AF Amp	1	
Q352	YEAN2SC2785		Power Amp Driver	1	
Q353	YEAN2SA1175		Power Amp Driver	1	
Q354	YEAN2SD600EF		Power Amp	1	
Q355	YEAN2SB631EF		Power Amp	1	
Q356	YEANC3855OY		Power Amp	1	
Q357	YEAN1491OY		Power Amp	1	
Q700 to 702	YEAN2SA1175		Mute Control	3	
Q703	YEAN2SC2785		Power Amp	1	
Q704	YEAN2SD600EF		Voltage Regulator	1	
Q705	YEAN2SB631EF		Voltage Regulator	1	
Q706, 707	YEAN2SC2785		Switching	2	
Q708	YEAN2SA1175		Voltage Regulator	1	
Q709	YEAN2SD600EF		Voltage Regulator	1	
Q710	YEAN2SC2785		Switching	1	
Q711, 712	YEAN2SB631EF		Driver Amp	2	
Q713 to 716	YEAND1213RS		Muting	4	
Q717	YEAN2SB810		Voltage Regulator	1	
Q806, 807	YEAN2SC2785		Switching	2	
Q808	YEAN2SA1175		Voltage Regulator	1	
Q809	YEAN2SD600EF		Voltage Regulator	1	
Q810	YEAN2SC2785		Switching	1	
Q811, 812	YEAN2SB631EF		Driver Amp	2	
Q813 to 816	YEAND1213RS		Muting	4	

[AP2109]

DIODES

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
D200, 201	MA165			2	
D250, 251	MA165			2	
D300, 301	MA165			2	
D350, 351	MA165			2	
D700	MA165			1	
D701	YEADDSM1A2			1	
D702	MA165			1	
D703, 704	YEADDSM1A2			2	
D705	MA165			1	
D706 to 708	YEADDSM1A2			3	
D709	YEADRD56JGB3		Zener Diode (5.6V)	1	
D710, 711	YEADD12JSB3		Zener Diode (12V)	2	
D712, 713	YEADDSM1A2			2	
D714	YEADD12JSB3		Zener Diode (12V)	1	
D716	YEADU05B			1	
D717	YEADDFB05C			1	
D718	YEADFMU22S			1	
D719	YEADFMU22R			1	
D814	YEADD12JSB3		Zener Diode (12V)	1	
D816	YEADU05B			1	
D817	YEADDFB05C			1	
D818	YEADFMU22S			1	
D819	YEADFMU22R			1	

[AP2109]

CAPACITORS

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
C200, 201	ECEA1HU2R2		2.2 MFD 50WV Electrolytic	2	
C202, 203	YEU05SL820J		82 PF 50WV Ceramic	2	
C204, 205	ECEA1CU100		10 MFD 16WV Electrolytic	2	
C206	ECEA1AU101		100 MFD 10WV Electrolytic	1	
C207	YEU05SL270J		27 PF 50WV Ceramic	1	

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
C208	YECQZ1H333K		0.033 MFD 50WV Polyester	1	
C209	YEU05SL150J		15 PF 50WV Ceramic	1	
C210	YECQZ1H333K		0.033 MFD 50WV Polyester	1	
C211, 212	YEU05SL560J		56 PF 50WV Ceramic	2	
C250, 251	ECEA1HU2R2		2.2 MFD 50WV Electrolytic	2	
C252, 253	YEU05SL820J		82 PF 50WV Ceramic	2	
C254, 255	ECEA1CU100		10 MFD 16WV Electrolytic	2	
C256	ECEA1AU101		100 MFD 10WV Electrolytic	1	
C257	YEU05SL270J		27 PF 50WV Ceramic	1	
C258	YECQZ1H333K		0.033 MFD 50WV Polyester	1	
C259	YEU05SL150J		15 PF 50WV Ceramic	1	
C260	YECQZ1H333K		0.033 MFD 50WV Polyester	1	
C261, 262	YEU05SL560J		56 PF 50WV Ceramic	2	
C300, 301	ECEA1HU2R2		2.2 MFD 50WV Electrolytic	2	
C302, 303	YEU05SL820J		82 PF 50WV Ceramic	2	
C304, 305	ECEA1CU100		10 MFD 16WV Electrolytic	2	
C306	ECEA1AU101		100 MFD 10WV Electrolytic	1	
C307	YEU05SL270J		27 PF 50WV Ceramic	1	
C308	YECQZ1H333K		0.033 MFD 50WV Polyester	1	
C309	YEU05SL150J		15 PF 50WV Ceramic	1	
C310	YECQZ1H333K		0.033 MFD 50WV Polyester	1	
C311, 312	YEU05SL560J		56 PF 50WV Ceramic	2	
C350, 351	ECEA1HU2R2		2.2 MFD 50WV Electrolytic	2	
C352, 353	YEU05SL820J		82 PF 50WV Ceramic	2	
C354, 355	ECEA1CU100		10 MFD 16WV Electrolytic	2	
C356	ECEA1AU101		100 MFD 10WV Electrolytic	1	
C357	YEU05SL270J		27 PF 50WV Ceramic	1	
C358	YECQZ1H333K		0.033 MFD 50WV Polyester	1	
C359	YEU05SL150J		15 PF 50WV Ceramic	1	
C360	YECQZ1H333K		0.033 MFD 50WV Polyester	1	
C361, 362	YEU05SL560J		56 PF 50WV Ceramic	2	
C700	ECEA1CU100		10 MFD 16WV Electrolytic	1	
C701	ECEA1CU220		22 MFD 16WV Electrolytic	1	
C702	ECEA1CU220		22MFD 16WV Electrolytic	1	
C703	ECEA1CU100		10 MFD 16WV Electrolytic	1	
C704	ECEA1AU221		220 MFD 10WV Electrolytic	1	
C705	ECEA1AU470		47 MFD 10WV Electrolytic	1	
C706, 707	ECEA1CU100		10 MFD 16WV Electrolytic	2	
C708, 709	ECEA1CU330		33 MFD 16WV Electrolytic	2	
C710, 711	ECEA1CU101		100 MFD 16WV Electrolytic	2	
C713	ECEA1CU100		10 MFD 16WV Electrolytic	1	
C714	ECEA1CU101		100 MFD 16WV Electrolytic	1	
C715, 716	ECEA1CU100		10 MFD 16WV Electrolytic	2	
C717	ECEA1CU101		100 MFD 16WV Electrolytic	1	
C718	YECQZ1H223K		0.022 MFD 50WV Polyester	1	
C719	YECQZ1H222K		0.0022 MFD 50WV Polyester	1	
C720	ECEA1AU101		100 MFD 10WV Electrolytic	1	
C721	YECQZ1H222K		0.0022 MFD 50WV Polyester	1	
C722	ECEA1HU4R7		4.7 MFD 50WV Electrolytic	1	
C723 to 726	YEECUPF1V471		470 MFD 35WV Electrolytic	4	
C728	YEECUPF1C471		470 MFD 16WV Electrolytic	1	
C729, 730	YEECLGF1V472		4700 MFD 35WV Electrolytic	2	
C731	YEECUPF1C471		470 MFD 16WV Electrolytic	1	
C733	YEECUPF1C332		3300 MFD 16WV Electrolytic	1	
C755, 756	YECQZ1H333K		0.033 MFD 50WV Polyester	2	
C813	ECEA1CU100		10 MFD 16WV Electrolytic	1	
C814	ECEA1CU101		100 MFD 16WV Electrolytic	1	
C815, 816	ECEA1CU100		10 MFD 16WV Electrolytic	2	
C817	ECEA1CU101		100 MFD 16WV Electrolytic	1	
C818	YECQZ1H223K		0.022 MFD 50WV Polyester	1	
C819	YECQZ1H122K		0.0012 MFD 50WV Polyester	1	
C820	ECEA1AU101		100 MFD 10WV Electrolytic	1	
C821	YECQZ1H222K		0.0022 MFD 50WV Polyester	1	
C822	ECEA1HU4R7		4.7 MFD 50WV Electrolytic	1	
C823 to 826	YEECUPF1V471		470 MFD 35WV Electrolytic	4	
C828	YEECUPF1C471		470 MFD 16WV Electrolytic	1	
C829, 830	YEECLGF1V472		4700 MFD 35WV Electrolytic	2	
C831	YEECUPF1C471		470 MFD 16WV Electrolytic	1	

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
C833	YEECUPF1C332		3300 MFD 16WV Electrolytic	1	

[AP2109]

RESISTOR

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
R200	ERD25TJ222		2.2k ohms 1/4W Carbon	1	
R201, 202	ERD25TJ102		1k ohms 1/4W Carbon	2	
R203,204	ERD25TJ473		47k ohms 1/4W Carbon	2	
R205, 206	ERD25TJ821		820 ohms 1/4W Carbon	2	
R208, 209	ERD25TJ222		2.2k ohms 1/4W Carbon	2	
R210, 211	ERD25TJ822		8.2k ohms 1/4W Carbon	2	
R212	ERDS2TJ222		2.2k ohms 1/4W Carbon	1	
R213	ERDS2TJ102		1k ohms 1/4W Carbon	1	
R214	ERDS2TJ473		47k ohms 1/4W Carbon	1	
R215	ERD25TJ102		1k ohms 1/4W Carbon	1	
R216	ERD25TJ123		12k ohms 1/4W Carbon	1	
R217	ERD25TJ471		470 ohms 1/4W Carbon	1	
R218	ERD25TJ223		22k ohms 1/4W Carbon	1	
R219	ERD25TJ684		680k ohms 1/4W Carbon	1	
R220	ERD25TJ222		2.2k ohms 1/4W Carbon	1	
R221	ERD25TJ821		820 ohms 1/4W Carbon	1	
R222, 223	ERD25TJ471		470 ohms 1/4W Carbon	2	
R224, 225	ERD25TJ102		1k ohms 1/4W Carbon	2	
R226, 227	ERD25TJ221		220 ohms 1/4W Carbon	2	
R228	ERD25TJ102		1k ohms 1/4W Carbon	1	
R229	ERD25TJ102		1k ohms 1/4W Carbon	1	
R230	ERGC55R10K		0.1 ohms 5W Cement	1	
R231	ERD25TJ153		15k ohms 1/4W Carbon	1	
R233	ERD25TJ100		10 ohms 1/4W Carbon	1	
R234	ERD25TJ563		56k ohms 1/4W Carbon	1	
R250	ERD25TJ222		2.2k ohms 1/4W Carbon	1	
R251, 252	ERD25TJ102		1k ohms 1/4W Carbon	2	
R253, 254	ERD25TJ473		47k ohms 1/4W Carbon	2	
R255, 256	ERD25TJ821		820 ohms 1/4W Carbon	2	

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
R258, 259	ERD25TJ222		2.2k ohms 1/4W Carbon	2	
R260, 261	ERD25TJ822		8.2k ohms 1/4W Carbon	2	
R262	ERD25TJ222		2.2k ohms 1/4W Carbon	1	
R263	ERD25TJ102		1k ohms 1/4W Carbon	1	
R264	ERD25TJ473		47k ohms 1/4W Carbon	1	
R265	ERD25TJ102		1k ohms 1/4W Carbon	1	
R266	ERD25TJ123		12k ohms 1/4W Carbon	1	
R267	ERD25TJ471		470 ohms 1/4W Carbon	1	
R268	ERD25TJ473		47k ohms 1/4W Carbon	1	
R269	ERD25TJ684		680k ohms 1/4W Carbon	1	
R270	ERD25TJ222		2.2k ohms 1/4W Carbon	1	
R271	ERD25TJ821		820 ohms 1/4W Carbon	1	
R272, 273	ERD25TJ471		470 ohms 1/4W Carbon	2	
R274, 275	ERD25TJ102		1k ohms 1/4W Carbon	2	
R276, 277	ERD25TJ 221		220 ohms 1/4W Carbon	2	
R278, 279	ERD25TJ102		1k ohms 1/4W Carbon	2	
R280	ERGC55R10K		0.1 ohms 5W Cement	1	
R281	ERD25TJ153		15k ohms 1/4W Carbon	1	
R283	ERD25TJ100		10 ohms 1/4W Carbon	1	
R284	ERD25TJ563		56k ohms 1/4W Carbon	1	
R300	ERD25TJ222		2.2k ohms 1/4W Carbon	1	
R301, 302	ERD25TJ102		1k ohms 1/4W Carbon	2	
R303, 304	ERD25TJ473		47k ohms 1/4W Carbon	2	
R305	ERD25TJ821		820 ohms 1/4W Carbon	1	
R306	ERD25TJ821		820 ohms 1/4W Carbon	1	
R308, 309	ERD25TJ222		2.2k ohms 1/4W Carbon	2	
R310, 311	ERD25TJ822		8.2k ohms 1/4W Carbon	2	
R312	ERD25TJ222		2.2k ohms 1/4W Carbon	1	
R313	ERD25TJ102		1k ohms 1/4W Carbon	1	
R314	ERD25TJ473		47k ohms 1/4W Carbon	1	
R315	ERD25TJ102		1k ohms 1/4W Carbon	1	
R316	ERD25TJ123		12k ohms 1/4W Carbon	1	
R317	ERD25TJ471		470 ohms 1/4W Carbon	1	
R318	ERD25TJ223		22k ohms 1/4W Carbon	1	

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
R319	ERD25TJ684		680k ohms 1/4W Carbon	1	
R320	ERD25TJ222		2.2k ohms 1/4W Carbon	1	
R321	ERD25TJ821		820 ohms 1/4W Carbon	1	
R322, 323	ERD25TJ471		470 ohms 1/4W Carbon	2	
R324, 325	ERD25TJ102		1k ohms 1/4W Carbon	2	
R326, 327	ERD25TJ221		220 ohms 1/4W Carbon	2	
R328	ERD25TJ102		1k ohms 1/4W Carbon	1	
R329	ERD25TJ102		1k ohms 1/4W Carbon	1	
R330	ERGC55R10K		0.1 ohms 5W Cement	1	
R331	ERD25TJ153		15k ohms 1/4W Carbon	1	
R333	ERD25TJ100		10 ohms 1/4W Carbon	1	
R334	ERD25TJ563		56k ohms 1/4W Carbon	1	
R350	ERD25TJ222		2.2k ohms 1/4W Carbon	1	
R351, 352	ERD25TJ102		1k ohms 1/4W Carbon	2	
R353, 354	ERD25TJ473		47k ohms 1/4W Carbon	2	
R355, 356	ERD25TJ821		820 ohms 1/4W Carbon	2	
R358, 359	ERD25TJ222		2.2k ohms 1/4W Carbon	2	
R360, 361	ERD25TJ822		8.2k ohms 1/4W Carbon	2	
R362	ERD25TJ222		2.2k ohms 1/4W Carbon	1	
R363	ERD25TJ102		1k ohms 1/4W Carbon	1	
R364	ERD25TJ473		47k ohms 1/4W Carbon	1	
R365	ERD25TJ102		1k ohms 1/4W Carbon	1	
R366	ERD25TJ123		12k ohms 1/4W Carbon	1	
R367	ERD25TJ471		470 ohms 1/4W Carbon	1	
R368	ERD25TJ223		22k ohms 1/4W Carbon	1	
R369	ERD25TJ684		680k ohms 1/4W Carbon	1	
R370	ERD25TJ222		2.2k ohms 1/4W Carbon	1	
R371	ERD25TJ821		820 ohms 1/4W Carbon	1	
R372, 373	ERD25TJ471		470 ohms 1/4W Carbon	2	
R374, 375	ERD25TJ102		1k ohms 1/4W Carbon	2	
R376, 377	ERD25TJ221		220 ohms 1/4W Carbon	2	
R378	ERD25TJ102		1k ohms 1/4W Carbon	1	
R379	ERD25TJ102		1k ohms 1/4W Carbon	1	
R380	ERGC55R10K		0.1 ohms 5W Cement	1	

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
R381	ERD25TJ153		15k ohms 1/4W Carbon	1	
R383	ERD25TJ100		10 ohms 1/4W Carbon	1	
R384	ERD25TJ563		56k ohms 1/4W Carbon	1	
R700, 701	ERD25TJ103		10k ohms 1/4W Carbon	2	
R702	ERD25TJ562		5.6k ohms 1/4W Carbon	1	
R703	ERD25TJ333		33k ohms 1/4W Carbon	1	
R704	ERD25TJ103		10k ohms 1/4W Carbon	1	
R706	ERD25TJ122		1.2k ohms 1/4W Carbon	1	
R707	ERD25TJ122		1.2k ohms 1/4W Carbon	1	
R708	ERD25TJ683		68k ohms 1/4W Carbon	1	
R709	ERD25TJ472		4.7k ohms 1/4W Carbon	1	
R710	ERD25TJ473		47k ohms 1/4W Carbon	1	
R711	ERD25TJ153		15k ohms 1/4W Carbon	1	
R712	ERD25TJ122		1.2k ohms 1/4W Carbon	1	
R713	ERD25TJ103		10k ohms 1/4W Carbon	1	
R714	ERD25TJ153		15k ohms 1/4W Carbon	1	
R715	ERD25TJ102		1k ohms 1/4W Carbon	1	
R716	ERD25TJ223		22k ohms 1/4W Carbon	1	
R717, 718	ERD25TJ472		4.7k ohms 1/4W Carbon	2	
R719, 720	ERD25TJ332		3.3k ohms 1/4W Carbon	2	
R723, 724	ERD25TJ103		10k ohms 1/4W Carbon	2	
R725, 726	ERD25TJ472		4.7k ohms 1/4W Carbon	2	
R727	ERD25TJ103		10k ohms 1/4W Carbon	1	
R728	ERD25TJ222		2.2k ohms 1/4W Carbon	1	
R729	ERD25TJ103		10k ohms 1/4W Carbon	1	
R731	ERD25TJ102		1k ohms 1/4W Carbon	1	
R732	ERD25TJ333		33k ohms 1/4W Carbon	1	
R733 to 735	ERD25TJ472		4.7k ohms 1/4W Carbon	3	
R736	ERD25TJ332		3.3k ohms 1/4W Carbon	1	
R737	ERD25TJ222		2.2k ohms 1/4W Carbon	1	
R738	ERD25TJ104		100k ohms 1/4W Carbon	1	
R739	ERD25TJ103		10k ohms 1/4W Carbon	1	
R740	ERD25TJ473		47k ohms 1/4W Carbon	1	
R741	ERD25TJ222		2.2k ohms 1/4W Carbon	1	

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
R742	ERD25TJ123		12k ohms 1/4W Carbon	1	
R744	ERD25TJ221		220 ohms 1/4W Carbon	1	
R745	ERD25TJ560		56 ohms 1/4W Carbon	1	
R746	ERD25TJ564		560k ohms 1/4W Carbon	1	
R747	ERD25TJ221		220 ohms 1/4W Carbon	1	
R748	ERD25TJ560		56 ohms 1/4W Carbon	1	
R749	ERD25TJ331		330 ohms 1/4W Carbon	1	
R750	ERD25TJ473		47k ohms 1/4W Carbon	1	
R751 to 754	ERS01PJ3R3		3.3 ohms 1W Metal Film	4	
R755 to 758	ERD25TJ470		47 ohms 1/4W Carbon	4	
R760	ERD50VJ122		1.2k ohms 1/2W Carbon	1	
R823	ERD25TJ103		10k ohms 1/4W Carbon	1	
R824	ERD25TJ103		10k ohms 1/4W Carbon	1	
R825, 826	ERD25TJ472		4.7k ohms 1/4W Carbon	2	
R827	ERD25TJ103		10k ohms 1/4W Carbon	1	
R828	ERD25TJ222		2.2k ohms 1/4W Carbon	1	
R829	ERD25TJ103		10k ohms 1/4W Carbon	1	
R831	ERD25TJ102		1k ohms 1/4W Carbon	1	
R832	ERD25TJ333		33k ohms 1/4W Carbon	1	
R833 to 835	ERD25TJ472		4.7k ohms 1/4W Carbon	3	
R836	ERD25TJ332		3.3k ohms 1/4W Carbon	1	
R837	ERD25TJ222		2.2k ohms 1/4W Carbon	1	
R838	ERD25TJ104		100k ohms 1/4W Carbon	1	
R839	ERD25TJ103		10k ohms 1/4W Carbon	1	
R840	ERD25TJ473		47k ohms 1/4W Carbon	1	
R841	ERD25TJ222		2.2k ohms 1/4W Carbon	1	
R842	ERD25TJ123		12k ohms 1/4W Carbon	1	
R844	ERD25TJ221		220 ohms 1/4W Carbon	1	
R845	ERD25TJ560		56 ohms 1/4W Carbon	1	
R846	ERD25TJ564		560k ohms 1/4W Carbon	1	
R847	ERD25TJ221		220 ohms 1/4W Carbon	1	
R848	ERD25TJ560		56 ohms 1/4W Carbon	1	
R849	ERD25TJ331		330 ohms 1/4W Carbon	1	
R850	ERD25TJ473		47k ohms 1/4W Carbon	1	

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
R851 to 854	ERS01PJ3R3		3.3 ohms 1W Metal Film	4	
R855 to 858	ERD25TJ470		47 ohms 1/4W Carbon	4	
R860	ERD50VJ122		1.2k ohms 1/2W Carbon	1	

COILS & TRANSFORMERS

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
L700	YETQ020F054A		Choke Coil	1	
L701	YETQ030F101		Choke Coil	1	
L702	YELQ05N056		Choke Coil	1	
L705 to 707	YEAY027		Choke Coil	3	
L801	YETQ030F101		Choke Coil	1	
L805 to 807	YEAY027		Choke Coil	3	
T700	YETP020F004		Driver Transformer	1	
T701	YEAY028		Switching Transformer	1	
T800	YETP020F004		Drive Transformer	1	
T801	YEAY028		Switching Transformer	1	

VARIABLE RESISTORS

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
VR200, 300	YESVR024		10k ohms Level Control	1	
VR201	YESVR025		1k ohms Semi Fixed	1	
VR250, 350	YESVR024		10k ohms Level Control	1	
VR251	YESVR025		1k ohms Semi Fixed	1	
VR301	YESVR025		1k ohms Semi Fixed	1	
VR351	YESVR025		1k ohms Semi Fixed	1	

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
			SWITCH		
SW700, 800	YEAS07156		Speaker Selector	2	
			RELAYS		
RY200	YEAS15035		Relay	1	
RY250	YEAS15035		Relay	1	
RY300	YEAS15035		Relay	1	
RY350	YEAS15035		Relay	1	
RY752	YEAS15033		Relay	1	
RY852	YEAS15033		Relay	1	
			POSISTOR		
TH700	YEASQ02002		Posistor	1	